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# Structural Changes in EC Trade Intensities

by Mathias Lefeldt and Albert Schneider, Hamburg \*

**The European Economic Community has now been in existence for about 20 years. Five years have elapsed since it was enlarged. What progress have the member countries made in the integration of their foreign trade? What would be the repercussions of a southward extension of the EC to take in Greece, Portugal and Spain?**

The gross product of the world economy doubled in real terms during the 15 years from 1960 to 1975. The international trade expanded during the same period by 175%<sup>1</sup>. Such has been the effect of the progressive integration of the world economy. Individual countries have been drawn into the integration process to different degrees. The effect of the expansion of trade on regional structural trends also calls for enquiry. Integration-oriented regions such as the European Communities are of special interest in this connection. The intra-zonal trade of such preference areas may be expected to show an above-average growth of intensity when there is a growing inclination to engage in foreign trade — i.e. their foreign trade will show a trend towards regional concentration.

## Measurement of Trade Intensity

The percentage figures commonly used in empirical studies of foreign trade are each by itself only of limited evidential value for an analysis of the development of trade integration between individual countries, no matter whether they refer to the share in the country's exports<sup>2</sup> or in import markets<sup>3</sup>, because they leave the two-dimensional character of the problem out of account. The statement for instance that Belgium—Luxembourg had a market share of 10% in the German imports in 1972 and France one of 14% does not warrant the conclusion that the imports of the Federal Republic are more highly integrated with the French exports. Belgium—Luxembourg being the economically smaller partner of the Federal Republic, an opposite impression is created if the

same trade flows are regarded as export market shares of the countries concerned. Viewed as such they show Belgium—Luxembourg to have sent 29% and France only 21% of their total exports to the Federal Republic. It is extremely difficult to weigh these two statements against each other. An integration analysis therefore calls for a measurement concept pertaining to both aspects (import/export).

The so-called delta-coefficient is an intensity indicator which has of late frequently been used in the international literature. It denotes the deviation of the actual bilateral trade flow (from country *i* to country *j*) from its hypothetical "norm flow" as determined by probability considerations<sup>4</sup>. If the actual flow is the same as the "norm flow", their quotient (the delta-coefficient) equals 1. This "normal intensity" occurs however only if the bilateral trade flow equals the flow to be expected in the light of the importance of the partner countries in international trade.

## High Intra-Intensity

The trade intensity rates of the founder members of the European Community were in 1958 already mostly above the norm. It is worth noting that the Federal Republic in particular showed twice the normal rate of trade intensity in relation to other Community countries, and this both in exports and in imports. This overall result was reflected in all the *bilateral* relations individually. Considerable differences existed however between the other member countries. France for instance recorded high intensity rates in its trade with direct neighbours but the intensity of the French trade with the Netherlands was below the norm (cf. Table 1). The trade of Belgium—Luxembourg and the Netherlands with Italy showed low rates of intensity while the intra-Benelux relations were highly intensive.

A comparison of the intensity coefficients for 1958 with those for 1972 and 1976 shows that they rose on average but at the same time tended to con-

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<sup>1</sup> Cf. GATT, International Trade 1975/1976, p. 4.

<sup>2</sup> Share of the exports of country *i* to country *j* in the total exports of country *i*.

<sup>3</sup> Share of the exports of country *i* to country *j* in the total imports of country *j*.

<sup>4</sup> A detailed exposition of the concept of the delta-coefficient is to be found in Mathias Lefeldt, Grundmodelle der Außenhandelsprognose (Basic models of foreign trade prognosis), HWWA Report No. 30, Hamburg 1975.

verge markedly. The trade relations between Italy and the Benelux countries (especially Belgium–Luxembourg) are still below the intensity norm but the growth rates in Table 1 indicate a definite intensification of trade between them. They also show a decline of the highest intensity rates, those in intra-Benelux trade. For 1973–1976 almost all intra-Community trade flows in the EC of the Six betoken a slight tendency towards less intensity.

### Determinants of Trade Intensity

The following factors operate generally in favour of trade concentration:

□ Grant of tariff preferences and renunciation of quantitative and qualitative constraints on the trade between individual countries.

□ Compatibility of the economic structures of the trade partners; positive effects on trade may be expected if the structure of imports (the structure of requirements) of the importing country matches the structure of exports (the supply structure) of the exporting country or if – in line with the Linder theorem<sup>5</sup> – both countries are at an ap-

proximately equal level of industrialization and therefore offer opportunities for active intra-industrial trade exchanges.

□ Existence of kindred social, cultural, political and economic systems and geographical vicinity. Geographical proximity<sup>6</sup>, political alliances, language links and similarity of economic laws for instance are seen to have a positive effect on bilateral goods exchanges.

The relatively weak intensity of the trade between Italy and the Benelux countries for example is due to geographical and cultural factors while the exceptionally strong integration between the Benelux countries is due to their cultural and geographical proximity as well as to the existence (since 1948) of preferential tariffs. The central geographical position of the Federal Republic was probably of prime importance for the high intensity rates with which it entered the Community in 1958.

It was largely because of the preferential tariff system of the EC that the trade integration rates between the partner countries tended to rise and

<sup>5</sup> Cf. Staffan Burenstam Linder, *An Essay on Trade and Transformation*, Stockholm 1961.

<sup>6</sup> Cf. Hans Linnemann, *Trade Flows and Geographical Distance or the Importance of Being Neighbours*, in: H. C. Bos (ed.), *Towards Balanced International Growth*, Amsterdam, London 1969.

**Table 1**  
**Level and Development of the Intensity of Trade between EC Founder Members,**  
**Total Trade in 1958, 1972 and 1976 \***

| Exporting Country           | Importing Country | Fed. Republic of Germany |          | France |          | Italy |          | Netherlands |          | Belgium/Luxembourg |          | EC of the Six |          |
|-----------------------------|-------------------|--------------------------|----------|--------|----------|-------|----------|-------------|----------|--------------------|----------|---------------|----------|
|                             |                   | Level                    | Change % | Level  | Change % | Level | Change % | Level       | Change % | Level              | Change % | Level         | Change % |
| Federal Republic of Germany | 1958              |                          |          | 1,423  |          | 1,502 |          | 2,421       |          | 2,142              |          | 1,813         |          |
|                             | 1972              |                          |          | 1,717  | 20,7     | 1,603 | 6,7      | 2,120       | – 12,4   | 1,941              | – 9,4    | 1,821         | 0,4      |
|                             | 1976              |                          |          | 1,626  | – 5,3    | 1,469 | – 8,4    | 2,026       | – 4,4    | 1,961              | 1,0      | 1,741         | – 4,4    |
| France                      | 1958              | 1,536                    |          |        |          | 1,034 |          | 0,594       |          | 2,483              |          | 1,419         |          |
|                             | 1972              | 1,906                    | 24,1     |        |          | 2,310 | 123,4    | 1,156       | 94,6     | 2,880              | 16,0     | 2,007         | 41,4     |
|                             | 1976              | 1,749                    | – 8,2    |        |          | 2,204 | – 4,6    | 1,105       | – 4,4    | 2,656              | – 7,8    | 1,867         | – 7,0    |
| Italy                       | 1958              | 2,129                    | – 2,0    | 0,951  |          |       |          | 0,726       |          | 0,884              |          | 1,354         |          |
|                             | 1972              | 2,087                    | – 6,3    | 2,096  | 120,4    |       |          | 0,882       | 21,5     | 0,881              | – 0,3    | 1,710         | 26,3     |
|                             | 1976              | 1,955                    |          | 2,164  | 3,2      |       |          | 0,810       | – 8,2    | 0,952              | 8,1      | 1,667         | – 2,5    |
| Netherlands                 | 1958              | 2,479                    |          | 0,809  |          | 0,834 |          |             |          | 5,130              |          | 2,150         |          |
|                             | 1972              | 2,911                    | 17,4     | 1,397  | 72,7     | 1,125 | 34,9     |             |          | 3,724              | – 27,4   | 2,311         | 7,5      |
|                             | 1976              | 2,942                    | 1,1      | 1,371  | – 1,9    | 1,090 | – 3,1    |             |          | 4,014              | 7,8      | 2,333         | 1,0      |
| Belgium/Luxembourg          | 1958              | 1,612                    |          | 1,980  |          | 0,752 |          | 6,697       |          |                    |          | 2,487         |          |
|                             | 1972              | 2,265                    | 40,5     | 2,719  | 37,3     | 0,976 | 29,8     | 4,404       | – 34,2   |                    |          | 2,496         | 0,4      |
|                             | 1976              | 2,284                    | 0,8      | 2,696  | – 0,8    | 1,055 | 8,1      | 4,313       | – 2,1    |                    |          | 2,514         | 0,7      |
| EC of the Six               | 1958              | 1,889                    |          | 1,327  |          | 1,163 |          | 2,348       |          | 2,566              |          | 1,818         |          |
|                             | 1972              | 2,240                    | 18,6     | 1,893  | 42,7     | 1,610 | 38,4     | 2,010       | – 14,4   | 2,258              | – 12,0   | 2,014         | 10,8     |
|                             | 1976              | 2,185                    | – 2,5    | 1,830  | – 3,3    | 1,526 | – 5,2    | 1,922       | – 4,4    | 2,310              | 2,3      | 1,958         | – 2,8    |

\* Decimal notations marked by commas.

Source: Own calculations based on data of IMF: *Direction of Trade*, several years.

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converge in the time from the conception of the customs union to its completion. It brought the geographically and culturally "more remote" partner countries into closer economic proximity to each other but had also the effect of "de-integrating" the intra-Benelux relations. The existence of a relatively close correlation between growing integration and tariff reduction has been pointed out in an earlier study<sup>7</sup>. The recession of the trade intensities between the old EC countries since 1973 is due to the diversionary effects of the enlargement of the EC.

### Sectoral Key-Points

The division of exports and imports by commodity classes is of special importance as a determinant of the level of trade intensity and also of changes in trade intensity. An analysis by commodity classes indicates the kinds of merchandise which account for high overall trade integration in particular instances. Approximate results can be obtained by disaggregation by SITC sections<sup>8</sup>.

This disaggregation shows for instance that the high import intensity observed in the trade of the Federal Republic with the Netherlands is due to high intensities in food, beverages and tobacco (SITC 0+1), non-mineral crude materials (2+4) and also machinery and transport equipment (SITC 7) while the intensities in the chemical section (SITC 5) and manufactured goods (SITC 6+8) are somewhat lower. It is interesting to note that similar intensity variations between the same commodity classes are to be found in the exports of the Federal Republic to the Netherlands. This fact suggests that the exchanged goods are of a

complementary nature. The trade integration of the Federal Republic with France on the other hand is relatively low; the trade in mineral crude materials alone is above the EC average (1958: 3.6 for exports and 2.9 for imports).

An examination of the intra-zonal trade of the EC of the Six as a whole shows the trade integration to be greatest in the SITC sections 0+1 (which derived special advantages from the European Agricultural Market), the other non-mineral crude materials (SITC 2+4) and chemicals (SITC 5); integration increases of 23.1, 17.2 and 12.6 % were recorded for these three groups. After 1973 however the six founding countries of the EC experienced no further increase in intra-trade intensity except in mineral fuels and chemical products; all other sections showed slight de-integration tendencies (cf. Table 2) as a result of the diversionary effect of the accession of the new members on the trade in specific products.

### Intensity Effects of the EC Enlargement

Three new members joined the European Community in 1973: Great Britain, Ireland and Denmark. During the period in which the EC of the Six established itself these countries felt the effect of their exclusion with its attendant adverse repercussions on trade integration to varying degrees; a major reason for this was that they belonged to another preferential zone, EFTA.

The exclusion effects were strongest in the case of Denmark; in 1958 its exports and imports showed a strong orientation towards certain EC countries. The integration rate with the EC as a whole was 1.8 for its imports and 1.9 for its exports. With the Federal Republic alone however it was 2.5 (imports) and 2.9 (exports), due largely to the high rates in SITC sections 0+1 (food, etc.) and 2+4 (other non-mineral crude materials). Denmark also had a rather high trade intensity with the Netherlands and Belgium-Luxembourg in

<sup>7</sup> Cf. Mathias Lefeldt, Jens Warnecke, Handelsintensitäten im EWG-Raum (Trade intensities in the EEC area), in: WIRTSCHAFTSDIENST, 55th year (1975), No. 8, p. 408 ff.

<sup>8</sup> The study includes the SITC sections 0+1 (food, beverages and tobacco); 2+4 (non-mineral crude materials); 3 (mineral crude materials); 5 (chemicals); 6+8 (manufactured goods); 7 (machinery and transport equipment). It is not possible to publish here full tables showing the delta-coefficient of the various commodity groups.

Table 2  
Intensity of Intra-EC Trade in Specified Commodity Classes, in 1958, 1972 and 1976 \*

| Region         | SITC Section | 0 + 1 |          | 2 + 4 |          | 3     |          | 5     |          | 6 + 8 |          | 7     |          |
|----------------|--------------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|
|                |              | Level | Change % | Level | Change % | Level | Change % | Level | Change % | Level | Change % | Level | Change % |
|                | Year         |       |          |       |          |       |          |       |          |       |          |       |          |
| EC of the Six  | 1958         | 1,912 |          | 2,032 |          | 1,820 |          | 1,521 |          | 1,978 |          | 2,110 |          |
|                | 1972         | 2,354 | 23,1     | 2,381 | 17,2     | 1,926 | 5,2      | 1,712 | 12,6     | 2,121 | 7,2      | 2,342 | 11,0     |
|                | 1975         | 2,341 | - 0,6    | 2,270 | - 4,7    | 2,218 | 15,2     | 1,719 | 4,1      | 1,988 | - 6,3    | 2,179 | - 7,0    |
| EC of the Nine | 1972         | 1,678 |          | 1,807 |          | 1,728 |          | 1,357 |          | 1,558 |          | 1,869 |          |
|                | 1975         | 1,901 | 13,3     | 1,838 | 1,7      | 2,073 | 20,0     | 1,433 | 5,6      | 3,084 | 97,9     | 1,815 | - 2,9    |

\* Decimal notations marked by commas.

Source: Own calculations based on data in UN: Commodity Trade Statistics, several years; UN: Monthly Bulletin of Statistics, several years; OECD: Foreign Trade Statistics, Series B. Trade by Commodities, several years.

regard to imports (1.4) and with Italy in regard to exports (1.98). By 1972 all these trade flows showed greatly reduced integration rates; the loss of trade varied between 67.0 % (in exports to Italy) and 47.1 % (in imports from Belgium—Luxembourg: cf. Table 3). Mainly affected was the trade in food and non-mineral crude materials.

The establishment of the customs union had much less effect on Great Britain and Ireland because the British foreign trade had an increasingly European orientation from the late fifties onwards, and this was not greatly hampered by the EC's tariff wall, presumably because of the general world-political readjustments (decolonization, dwindling importance of the Commonwealth). The increase in British trade intensities with the Community by 18.4 % (exports) and 15.5 % (imports) between 1958 and 1972 must be viewed against this background. The starting level of 0.6 (in exports and imports) has also to be borne in mind and so has the fact that in the absence of the tariff wall on the other side of the English Channel the British trade would probably have shown much greater integration gains. Only in the trade with "neighbouring" Holland and with Italy did the direct effects of the exclusion from the original EC

lead to an actual decline of the integration rate. In both cases the decline in trade intensity showed itself chiefly in SITC sections 0+1 (food, etc.), where it was due to the Agricultural Market Orders of the EC, and a few specialized industrial products of sections 6+8. The Irish economy is so closely enmeshed with the British one<sup>9</sup> that it showed similar tendencies.

The trade relations *between* the new members prior to their accession to the EC were marked by positive tendencies in almost all commodity classes, a fact which can be attributed to the formation of EFTA. This trend continued after their accession to the EC. The accession of the new members resulted in structural changes in the EC's trade. As was to be expected, all three new members experienced marked integration effects; the continental orientation of the British and Irish trade gained momentum. In the 14 years of the Community of the Six increased attention to European trade partners had resulted in average annual growth rates in trade intensity of at most 6.6 % (in Irish exports to the EC); from 1972 to

\* The intensity coefficients for the foreign trade between Great Britain and Ireland in 1958 were 6.4 and 8.2 and in 1972 even 8.1 and 9.4.

Table 3

Development of Trade Intensities between Old and New EC Member States, in 1958, 1972 and 1976 \*

| Old Member States        | New Member States | Great Britain |          |         |          | Ireland |          |         |          | Denmark |          |         |          | New Members Together |          |         |          |
|--------------------------|-------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|----------------------|----------|---------|----------|
|                          |                   | Imports       |          | Exports |          | Imports |          | Exports |          | Imports |          | Exports |          | Imports              |          | Exports |          |
|                          |                   | Level         | Change % | Level   | Change % | Level   | Change % | Level   | Change % | Level   | Change % | Level   | Change % | Level                | Change % | Level   | Change % |
| Fed. Republic of Germany | 1958              | 0,421         |          | 0,458   |          | 0,505   |          | 0,272   |          | 2,541   |          | 2,918   |          | 0,638                |          | 0,709   |          |
|                          | 1972              | 0,585         | 39,0     | 0,502   | 9,6      | 0,628   | 24,4     | 0,470   | 72,8     | 1,534   | -39,6    | 1,124   | -61,5    | 0,719                | 12,7     | 0,583   | -17,8    |
|                          | 1976              | 0,756         | 29,2     | 0,717   | 42,8     | 0,611   | -2,7     | 0,930   | 97,9     | 1,861   | 21,3     | 1,532   | 36,3     | 0,931                | 29,5     | 0,847   | 45,3     |
| France                   | 1958              | 0,533         |          | 0,389   |          | 0,354   |          | 0,106   |          | 0,742   |          | 0,563   |          | 0,546                |          | 0,398   |          |
|                          | 1972              | 0,780         | 46,3     | 0,776   | 99,5     | 0,517   | 46,0     | 0,600   | 366,0    | 0,687   | -7,4     | 0,430   | -23,6    | 0,752                | 37,7     | 0,721   | 81,2     |
|                          | 1976              | 1,078         | 38,3     | 0,963   | 24,1     | 0,798   | 54,4     | 0,740   | 23,3     | 0,635   | -7,6     | 0,657   | 52,8     | 0,989                | 31,5     | 0,906   | 25,7     |
| Italy                    | 1958              | 0,786         |          | 0,608   |          | 0,380   |          | 0,189   |          | 0,716   |          | 1,981   |          | 0,762                |          | 0,737   |          |
|                          | 1972              | 0,653         | -16,9    | 0,537   | -11,7    | 0,403   | 6,1      | 0,261   | 38,1     | 0,607   | -15,2    | 0,653   | -67,0    | 0,633                | -16,9    | 0,538   | -27,0    |
|                          | 1976              | 0,869         | 33,1     | 0,702   | 30,7     | 0,656   | 62,8     | 0,625   | 139,5    | 0,727   | 19,8     | 0,998   | 52,8     | 0,834                | 31,8     | 0,741   | 37,7     |
| Netherlands              | 1958              | 1,289         |          | 0,816   |          | 0,961   |          | 0,167   |          | 2,411   |          | 0,607   |          | 1,389                |          | 0,774   |          |
|                          | 1972              | 1,254         | -2,7     | 0,785   | -3,8     | 0,729   | -24,1    | 0,540   | 123,4    | 1,040   | -56,9    | 0,605   | -0,3     | 1,194                | -14,0    | 0,749   | -3,2     |
|                          | 1976              | 1,782         | 42,1     | 1,209   | 54,0     | 0,759   | 4,1      | 1,097   | 103,2    | 1,305   | 25,5     | 0,808   | 33,6     | 1,646                | 37,9     | 1,145   | 52,9     |
| Belgium/Luxembourg       | 1958              | 0,581         |          | 0,818   |          | 0,693   |          | 0,291   |          | 1,449   |          | 0,471   |          | 0,673                |          | 0,762   |          |
|                          | 1972              | 0,679         | 16,9     | 0,985   | 20,4     | 0,379   | -45,3    | 0,716   | 46,0     | 0,767   | -47,1    | 0,370   | -21,4    | 0,674                | 0,1      | 0,889   | 16,7     |
|                          | 1976              | 1,179         | 73,6     | 1,363   | 38,4     | 0,575   | 51,7     | 1,112   | 55,3     | 1,140   | 48,6     | 0,503   | 36,0     | 1,139                | 69,0     | 1,225   | 37,8     |
| EC of the Six            | 1958              | 0,637         |          | 0,565   |          | 0,548   |          | 0,207   |          | 1,767   |          | 1,534   |          | 0,747                |          | 0,654   |          |
|                          | 1972              | 0,736         | 15,5     | 0,669   | 18,4     | 0,554   | 1,1      | 0,507   | 144,9    | 1,060   | -40,0    | 0,728   | -52,5    | 0,770                | 3,1      | 0,668   | 2,1      |
|                          | 1976              | 1,039         | 41,2     | 0,925   | 38,3     | 0,674   | 21,7     | 0,885   | 74,6     | 1,284   | 21,1     | 1,010   | 38,7     | 1,059                | 37,5     | 0,935   | 40,0     |

\* Decimal notations marked by commas. Source: Own calculations; cf. Table 1.

1976 the growth was much faster, varying on an annual average between 5.0 and 15.0 %.

As far as the various commodity groups are concerned, the integration gains were greatest in food and beverages<sup>10</sup>. Nevertheless the degree of trade integration with the states of the old Community of the Six is still largely unsatisfactory in the case of Great Britain and Ireland. It is still far below the rate recorded in the trade between the Six (1976: 2.0). In some sections it is even below the integration norm of 1, for instance in the import and export flows of chemicals (SITC 5) and manufactured articles (SITC 6+8) which may therefore be assumed to hold still a considerable integration potential.

Denmark's trade relations with the Community of the Six on the other hand underwent a change of trend in 1972. While the rates of trade intensity recorded in 1958 had not yet been regained by 1976, substantial growth rates have in fact been achieved. In the 14 years from 1958 to 1972 the intensity rate had *declined* on an annual average by no more than 2.4 % (on the import side) and

3.1 % (on the export side); between 1972 and 1976 the trade intensity *increased* at annual rates averaging 4.9 % (in imports) and 8.9 % (in exports).

In regard to particular commodity classes the inclusion in the European agricultural system had a marked effect on Denmark. The export integration with the Federal Republic for instance increased in SITC sections 0+1 by an average of 25.2 % a year.

Reference has already been made to the consequences of the EC enlargement for the trade relations between the old members of the Community. The decline in trade intensity in 1973 to 1976 was related directly to the re-orientation towards the new members, and this also emerges from an examination of the intra-zonal EC trade divided by commodity classes. In the case of manufactured goods (SITC 6+8) for instance the intra-zonal trade intensity of the Six declined in 1973-1976 by 6.3 % while that of the Nine rose in this period by 97.9 % (cf. Table 2).

The question which countries have derived the greatest benefit from the enlargement of the EC must be approached in general with caution. The changes in trade intensities indicate however that

<sup>10</sup> Great Britain increased its import intensity with the members of the EC of the Six in this commodity class between 1972 and 1975 by 108.6 %. Ireland raised its rate at the same time by 77.5 %.

**Table 4**  
**Effects of the Common External Tariff of the EC of the Six and the EC of the Nine**  
**on the Intensity of their Trade with Selected Third Countries \***

| EC-Countries<br><br>Trading Partners | EC of the Six |          |         |          | EC of the Nine |          |         |          | Federal Republic |          |         |          |
|--------------------------------------|---------------|----------|---------|----------|----------------|----------|---------|----------|------------------|----------|---------|----------|
|                                      | Imports       |          | Exports |          | Imports        |          | Exports |          | Imports          |          | Exports |          |
|                                      | Level         | Change % | Level   | Change % | Level          | Change % | Level   | Change % | Level            | Change % | Level   | Change % |
| USA                                  | 1958          | 0,625    |         |          | 0,502          |          | 0,564   |          | 0,528            |          | 0,671   |          |
|                                      |               | - 21,8   |         |          | - 12,2         |          | - 7,6   |          | - 6,8            |          | - 26,5  |          |
|                                      | 1972          | 0,489    | 4,7     |          | 0,441          |          | 0,521   | 2,3      | 0,492            |          | 0,493   |          |
| Japan                                | 1976          | 0,512    |         |          | 0,320          |          | 0,533   |          | 0,368            |          | 0,504   |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | 2,2     |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | 0,356   |          |
| OPEC                                 | 1958          | 0,200    |         |          | 0,236          |          | 0,264   |          | 0,223            |          | 0,229   |          |
|                                      |               | 16,0     |         |          | - 24,6         |          | - 1,1   |          | - 9,9            |          | 38,0    |          |
|                                      | 1972          | 0,232    | 9,1     |          | 0,178          |          | 0,261   | 5,0      | 0,201            |          | 0,316   |          |
| Other Developing Countries           | 1976          | 0,253    |         |          | 0,130          |          | 0,274   |          | 0,151            |          | 0,313   |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | - 0,1   |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | 0,159   |          |
| State Trading Countries              | 1958          | 1,172    |         |          | 0,884          |          | 1,169   |          | 1,023            |          | 0,699   |          |
|                                      |               | 3,5      |         |          | 11,6           |          | 2,7     |          | 4,3              |          | 20,6    |          |
|                                      | 1972          | 1,213    | - 19,0  |          | 0,964          |          | 1,200   | - 20,8   | 1,067            |          | 0,843   |          |
| Other Countries                      | 1976          | 0,982    |         |          | 1,057          |          | 0,951   |          | 1,141            |          | 0,736   |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | - 12,7  |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | 1,094   |          |
| Other Countries                      | 1958          | 1,189    |         |          | 1,113          |          | 1,337   |          | 1,278            |          | 1,088   |          |
|                                      |               | - 42,6   |         |          | - 44,2         |          | - 45,4  |          | - 45,2           |          | - 38,8  |          |
|                                      | 1972          | 0,683    | - 1,5   |          | 0,621          |          | 0,730   | - 4,3    | 0,701            |          | 0,666   |          |
| Other Countries                      | 1976          | 0,673    |         |          | 0,608          |          | 0,699   |          | 0,650            |          | 0,697   |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | 0,566   |          |
| Other Countries                      | 1958          | 0,334    |         |          | 0,488          |          | 0,322   |          | 0,428            |          | 0,429   |          |
|                                      |               | 165,9    |         |          | 88,9           |          | 182,9   |          | 106,8            |          | 114,0   |          |
|                                      | 1972          | 0,888    | 10,7    |          | 0,922          |          | 0,911   | 9,0      | 0,885            |          | 0,918   |          |
| Other Countries                      | 1976          | 0,983    |         |          | 0,840          |          | 0,993   |          | 0,781            |          | 1,146   |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | 24,8    |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | 1,072   |          |
| Other Countries                      | 1958          | 1,016    |         |          | 1,058          |          | 1,090   |          | 0,936            |          | 1,494   |          |
|                                      |               | - 40,0   |         |          | - 19,6         |          | - 24,7  |          | 5,7              |          | - 48,3  |          |
|                                      | 1972          | 0,610    | 9,8     |          | 0,851          |          | 0,821   | 0,2      | 0,989            |          | 0,772   |          |
| Other Countries                      | 1976          | 0,670    |         |          | 23,0           |          | 0,823   |          | 1,121            |          | 0,854   |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | 10,6    |          |
|                                      |               |          |         |          |                |          |         |          |                  |          | 1,485   |          |

\* Decimal notations marked by commas. Source: Own calculations; cf. Table 1.

the new members taken together have increased their export integration with the Six slightly more than their import integration. This applies in particular to Denmark and Ireland while Great Britain experienced a stronger regional concentration on the Six in regard to its imports. The opening of the three new EC members' markets to goods from the Six was of special benefit to exports of Belgium-Luxembourg and France.

### Relations with Third Countries

The convergence tendencies noted in the foreign trade of the Six as well as the Nine side by side with a wide-spread increase of trade intensity found a parallel in the relations with third countries. The trade with these however was marked by generally declining intensity rates.

Great divergencies however emerge from a detailed examination. The intensity of EC imports and exports with the USA for instance decreased notably between 1958 and 1972. The Federal Republic which, being the most important trading country in the EC, finds the Community market too small for its exports was alone in increasing its integration with the USA further on the export side. Great Britain and Ireland have also intensified their trade relations with the USA; at the time in question they had of course not yet joined the EC. During the second integration phase, following the accession of the three new Community members, the de-intensification trend was more marked on the export side, and this in all EC countries. On the import side on the other hand the rates of trade intensities were stabilized or slightly increased (cf. Table 4).

If the EC's trade with the USA is of relatively low intensity, the trade relations with Japan are marked by an extremely low degree of intensity. As a matter of fact the tariff barriers of the Community had little effect on the Japanese competitive pressure as far as EC imports are concerned. The import intensity coefficient of the Federal Republic for instance rose between 1958 and 1976 by 36.7 % but the level of intensity was in the latter year — at 0.3 — still far below the average. The EC exports to Japan showed retrogressive intensity tendencies throughout the 1958–1976 period. It may be concluded from these facts that the tariff barriers had little effect on the competitiveness of the Japanese exports while the EC countries encountered in their preference zone better market conditions for their exports than in the Japanese market for instance.

The establishment of a preference zone had thoroughly negative effects on the EC's trade intensi-

ties with non-oil exporting developing countries. Particularly strong exclusory effects on both imports and exports were observed in the first phase of the customs union. It has to be taken into account however that in 1958 there still existed an above-average degree of trade intensities between the ex-colonial powers Great Britain and France in particular and the Third World countries which were formerly colonial territories. The reduction of trade intensity in such cases must be seen as a result of decolonization rather than as an effect of EC integration.

### Prospects for a Southward Extension

In an analysis of the EC's trade relations with the three South European candidates for membership — Greece, Spain and Portugal — it must be borne in mind that Portugal was a founder member of EFTA while Greece concluded an association agreement with the EC as early 1961<sup>11</sup> and Spain signed a trade agreement with the EC only in 1970. Accordingly the EC imports show evidence of strong exclusory effects on these countries between 1958 and 1972. The initially very high intensity rates declined considerably (cf. Table 5). Parallel trends emerged on the side of EC exports. But whereas the trade intensity continued to decline slightly in the following years as far as EC exports were concerned, the imports both of the Six and of the Nine showed a larger measure of intensities after 1972. The grant of unilateral preferences by the EC is the explanation.

**Table 5**  
**Intensity of the Trade of Greece, Portugal and Spain with the EC States \***

| Region         | Year/<br>SITC-<br>Section | Greece  |         | Portugal |         | Spain   |         |
|----------------|---------------------------|---------|---------|----------|---------|---------|---------|
|                |                           | Exports | Imports | Exports  | Imports | Exports | Imports |
| EC of the Six  | 1958 0—9                  | 2,207   | 2,097   | 1,145    | 1,922   | 1,772   | 1,062   |
|                | 1972 0—9                  | 1,640   | 1,403   | 0,659    | 1,007   | 1,253   | 1,060   |
|                | 1972 0—9                  |         |         |          |         |         |         |
| EC of the Nine | 1972 0—9                  | 1,393   | 1,324   | 1,197    | 1,174   | 1,274   | 1,077   |
|                | 1976 0—9                  | 1,530   | 1,185   | 1,433    | 1,210   | 1,356   | 0,954   |
|                | 1976 0—9                  |         |         |          |         |         |         |
| EC of the Nine | 1975 0+1                  | 1,30    | 0,95    | 1,08     | 0,40    | 1,57    | 0,48    |
|                | 2+4                       | 1,23    | 1,46    | 1,60     | 0,97    | 1,38    | 1,10    |
|                | 3                         | 1,90    | 0,29    | 0,50     | 1,28    | 1,76    | 0,44    |
|                | 5                         | 1,06    | 1,45    | 1,01     | 1,30    | 0,95    | 1,22    |
|                | 6+8                       | 1,30    | 1,34    | 1,15     | 1,38    | 1,06    | 1,27    |
|                | 7                         | 0,69    | 1,38    | 2,05     | 1,53    | 1,36    | 1,51    |
|                |                           |         |         |          |         |         |         |

\* Decimal notations marked by commas.  
Source: Own calculations; cf. Table 2.

An assessment of the structural consequences of accession to the EC by the three South European countries must be based on the assumption that any change in their foreign trade intensities will correspond to the currently existing comparative

<sup>11</sup> While Greece was ruled by the Junta, the agreement was not implemented.



advantages and disadvantages. Expansionary structural effects will therefore occur in industries of the acceding countries with an export intensity exceeding the import intensity with the corresponding industries of the EC. Conversely, contractive structural effects may be anticipated in the industries which despite the currently lower intensity level have already reached a degree of import intensity with the EC that exceeds their export intensity.

It may accordingly be said that in the event of accession to the EC considerable structural changes in favour of the primary sector may be expected in the three South European countries while an in part considerable intensification of imports may be predicted for the three acceding countries in the SITC sections 5, 6+8 and 7 which belong to the secondary sector. This may involve negative structural effects on the industries concerned in the acceding states and these may in part be substantial.

In regard to the likely sectoral structural effects of a southward extension of the EC on the present EC members it may be surmised that contractive effects will be felt in the agricultural

sphere in particular and especially in Italy and France which supply a similar range of products inside the EC as at present constituted. The reduction by Greece, Portugal and Spain of still existing import duties in the industrial sphere on the other hand will have a slight expansionary effect on the EC states, especially in the secondary sector<sup>12</sup>.

Seeing what problems are encumbering the EC's agricultural market at the present time already, it may be asked what point there is in enlarging the EC and what benefits it would bring to the acceding countries. Any advantages for these would be limited almost entirely to the agricultural sector. Whether this sector could continue to function as at present is not certain. In the industrial sector the South Europeans are liable to experience considerable disadvantages for their development. It follows that the increased trade intensity to be expected following a southward extension of the EC cannot be taken as an a priori argument for integration.

<sup>12</sup> Hajo Hasenpflug, Konsolidierung versus Erweiterung der Europäischen Gemeinschaft (Consolidation versus Enlargement of the European Community), in: WIRTSCHAFTSDIENST, 57th year (1977), No. 2, p. 98 ff. reached a similar conclusion.

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